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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,937	09/25/2003	James R. Clark	1-16188	2041

7590 12/15/2004

Attn: Stephen P. Evans, Esq  
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Toledo, OH 43604

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/670,937

**Applicant(s)**

CLARK, JAMES R.

**Examiner**

Christopher P. Schwartz

**Art Unit**

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

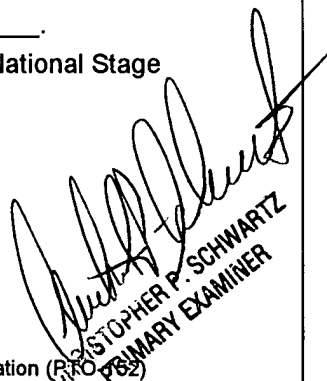
- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-752)
- 6) ☐ Other: \_\_\_\_.

  
CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement has been received and considered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 4,7-9,12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gee et al. '237 in view of either Hicks '378 or Chapter 1 of "Air Brake Basics".

Regarding claims 1,7 Gee et al. discloses a brake system concerned with controlling the braking effort exerted upon the front and rear axles of a tractor trailer to maximize braking capability and stability. As discussed in the last paragraph of col. 3 such a balanced braking also reduces wear on the brake pads. Note the actuators at 60-66 and the control valves at 106 and 108.

Gee lacks discussing varying specific dimensions of the brake actuators 60-66 to accomplish this.

However it is notoriously well known in the art to vary the length of the actuator chamber rods, piston surface area, chamber sizes etc. of the actuator to achieve different braking forces.

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The references to Hicks (see columns 1 and 2) and the "Air Brake Basics" manual (page 4 column 1) fairly suggest that it is well known to adjust these actuator parameters "... to meet braking requirements".

One having ordinary skill in the art at the time of the invention would have found it to be an obvious alternative to have altered the actuators of Gee et al. to that as claimed by applicant, to distribute the braking effort among the different axles dependent upon loading conditions of the vehicle, since it is notoriously well known in the art to vary these dimensions of the brake actuators to meet specific braking requirements.

Regarding claims 2-4,8,9,13-16 as discussed above, these requirements are met.

Regarding claim 12 the reference to Hicks is relied upon to show the actuators 60,64 of Gee et al. likely contain "diaphragms".

4. Claims 5,6,10,11,17-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Gee et al. as modified above as applied to claim 1 above, and further in view of Bueler or Plantan.

Regarding claims 5,6,10,11,17-19 although Gee et al. lacks a specific discussion of the particular fluid output ratios of the valves 106,108 to the respective brakes the references to Bueler (see col 6) or Plantan (see valves 110, and 106,108 in figure 1) teach it is notoriously well known to use proportioning valves to "proportion" the amount of fluid to the front and rear brakes or axles.

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Accordingly to have used such a well known valving arrangement as taught by these references in place of 106,108 in the device of Gee et al. would have amounted to an alternative equivalent valving arrangement of distributing the braking forces to the front and rear axles to that of Gee et al. dependent upon such well known factors as cost, weight and reliability.

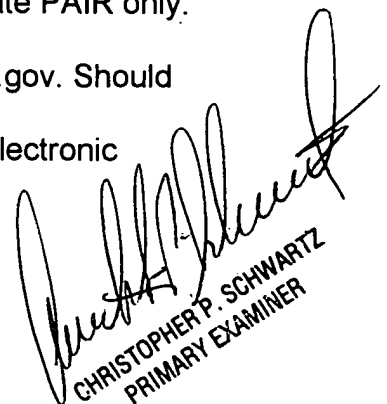
### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited should be reviewed before preparing a response to the action above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER